## Abstract of the Disclosure

## System and Method for Matching Diffraction Patterns

A method of analyzing patterns. The method comprises: receiving a first diffraction pattern; receiving a second diffraction pattern; receiving a third diffraction pattern; determining a similarity between the first and second diffraction pattern; determining a similarity between the first and third diffraction pattern; determining a similarity between the second and third diffraction pattern; and performing hierarchical cluster analysis on the first and second diffraction pattern based on the determined similarity.